engine **10** of the vehicle **1** is equal to or greater than the reference temperature, it is judged that the high efficiency recovery condition is satisfied, while if the water temperature of the internal combustion engine **10** is lower than a predetermined temperature, it is judged that the high efficiency recovery condition is not satisfied.

[0108] As explained above, it is possible to predict if the vehicle **1** will be driven over a long distance or will be driven over a short distance, based on the time elapsed from startup of the internal combustion engine **10**. On the other hand, the water temperature of the internal combustion engine **10** changes in accordance with the time elapsed from cold start of the internal combustion engine **10**. The water temperature becomes higher, as the elapsed time from cold start becomes longer. Therefore, it is possible to judge if the vehicle is being driven over a long distance, based on whether the water temperature of the internal combustion engine **10** is exceeding the reference temperature set for each user.

[0109] Therefore, in the third example, it is judged whether the high efficiency recovery condition is satisfied, based on whether the water temperature of the internal combustion engine **10** is over the reference temperature set for each user. At this time, the reference temperature for judging the high efficiency recovery condition is set based on the past history of the vehicle **1**. Specifically, the reference temperature is, for example, set to a minimum temperature at which the possibility of the vehicle **1** being driven over a long distance of equal to or greater than a reference distance is equal to or greater than a certain ratio from the past history.

[0110] Above, examples of the high efficiency recovery conditions were explained, but the high efficiency recovery conditions are not limited to these examples. Various conditions may be included in accordance with the objective, application, etc.

[0111] Note that, when the reference distance, reference water temperature, reference time, etc. in the high efficiency recovery condition are set manually by the user, these are set for example through the HMI **42**. In this case, for example, the display control part **33** may also display a user interface for setting the values of the high efficiency recovery condition through the HMI **42**. The user of the vehicle **1** can set the values of the high efficiency recovery condition through the user interface.

[0112] Flow Chart

[0113] FIG. **3** is a flow chart showing the control routine performed by the recovery control part **32** of the ECU **31** according to the present embodiment. The illustrated control routine is performed at constant time intervals.

[0114] First, at step S**11**, it is judged if the internal combustion engine **10** is being operated. If it is judged that the internal combustion engine **10** is not being operated, exhaust gas cannot flow into the CO_2 recovery device **20**, therefore the control routine proceeds to step S**15** where the operation of the CO_2 recovery device **20** is prohibited. On the other hand, if at step S**11** it is judged that the internal combustion engine **10** is being operated, the control routine proceeds to step S**12**.

[0115] At step S**12**, it is judged if the amount of recovery of CO_2 at the CO_2 recovery device **20** is smaller than the limit amount which can be recovered at the CO_2 recovery device **20**. The amount of recovery of CO_2 at the CO_2 recovery device **20** is, for example, calculated based on the amount of supply of fuel to the internal combustion engine **10** and the amount of supply of exhaust gas to the CO_2 recovery device **20**. The amount of supply of exhaust gas to the CO_2 recovery device **20** is, for example, calculated based on the engine rotational speed and the electric power supplied to the suction pump **22**. Note that, the amount of recovery of CO_2 at the CO_2 recovery device **20** may be calculated based on the concentration of CO_2 detected by the CO_2 concentration sensor (not shown) provided at the upstream side of the CO_2 recovery device **20** and the amount of supply of exhaust gas to the CO_2 recovery device **20**.

[0116] If at step S**12** it is judged that the amount of recovery of CO_2 at the CO_2 recovery device **20** is equal to or greater than the limit amount, the CO_2 recovery device **20** cannot recover CO_2 any more, therefore the control routine proceeds to step S**15** where the operation of the CO_2 recovery device **20** is prohibited. On the other hand, if at step S**12** it is judged that the amount of recovery of CO_2 at the CO_2 recovery device **20** is less than the limit amount, the control routine proceeds to step S**13**.

[0117] At step S**13**, it is judged if the high efficiency recovery condition is satisfied. Specifically, the recovery control part **32** judges that the high efficiency recovery condition is satisfied if the predicted driving distance to the destination input to the navigation system is equal to or greater than a reference distance. Further, the recovery control part **32** judges that the high efficiency recovery condition has been satisfied if the time elapsed from startup of the internal combustion engine **10** is equal to or greater than a reference time. Alternatively, the recovery control part **32** judges that the high efficiency recovery condition has been satisfied if the water temperature detected by the water temperature sensor **43** after cold startup of the internal combustion engine **10** becomes equal to or greater than the reference temperature. Note that, at step S**13**, the recovery control part **32** may judge that the high efficiency recovery condition has been satisfied when any two conditions among these conditions (for example, the predicted driving distance is equal to or greater than the reference distance and the time elapsed from startup of the internal combustion engine **10** is equal to or greater than the reference time) or all three of the conditions have been satisfied.

[0118] If at step S**13** it is judged that the high efficiency recovery condition is satisfied, the control routine proceeds to step S**14**. At step S**14**, operation of the CO_2 recovery device **20** is permitted and the control routine is ended.

[0119] In the present embodiment, when at step S**14** the operation of the CO_2 recovery device **20** is permitted, the CO_2 recovery device **20** is operated and accordingly the suction pump **22** and cooling part **23** are operated. On the other hand, when at step S**15** the operation of the CO_2 recovery device **20** is prohibited, the CO_2 recovery device **20** is stopped and accordingly the suction pump **22** and cooling part **23** are stopped.

[0120] Note that, after step S**14**, the display control part **33** may display an indicator showing that the CO_2 recovery device **20** is operating, through the HMI **42**. Similarly, after step S**15**, the display control part **33** may display an indicator showing that the CO_2 recovery device **20** has stopped, through the HMI **42**.

[0121] Further, for example, the user input part (that is, the HMI **42**), may receive an operation prohibit instruction prohibiting operation of the CO_2 recovery device **20** input by the user through a user interface. In this case, for example, the recovery control part **32** may prohibit operation of the